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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,996

06/17/2005

Yuqi Zhang

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27189

7590

05/23/2008

PROCOPIO, CORY, HARGREAVES & SAVITCH LLP

530 B STREET

SUITE 2100

SAN DIEGO, CA 92101

EXAMINER

MULLER, BRYAN R

ART UNIT

PAPER NUMBER

3723

NOTIFICATION DATE

DELIVERY MODE

05/23/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTONotifications@procopio.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,996	<b>Applicant(s)</b> ZHANG, YUQI	
	<b>Examiner</b> BRYAN R. MULLER	<b>Art Unit</b> 3723	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (CN 2522029 Y) in view of Xu (WO 0150939; U.S. 6,634,674 referenced as U.S. translation; cited WO publication on US Patent is incorrect, above WO reference is the corresponding publication to the actual U.S. Patent).

3. In reference to claim 1, Zhang discloses an outer pipe (8), an inner pipe (1) received in said outer pipe, the inner pipe having an outer surface and an inner surface and being provided axially with a row of detent holes (9), a locking device (4-7) having a detent pin (6) for positioning said inner pipe with respect to said outer pipe, a guiding bush (2) attached to said outer pipe, a first guiding member (11) disposed at the guiding bush, a second guiding member (groove 12) attached to said inner pipe, being engagable and slidable with said first guiding member so that the inner pipe and said outer pipe can move axially with respect to each other and wherein the detent pin of the locking device is inserted into one of said detent holes when said locking device is in a locking state (Fig. 1) and disengages the detent hole when said locking device is in an unlocking state (Fig. 2). However, Zhang fails to disclose that the detent holes penetrate through the wall of the inner pipe from said outer surface to said inner surface

Art Unit: 3723

or that the inner pipe has a *separate* inner liner layer fixed to the inner surface for isolating vacuum of the inner pipe from the detent holes. Xu discloses a similar telescopic suction tube for a vacuum cleaner having inner and outer pipes and a locking device to lock the inner and outer pipes in position relative to one another and Xu further discloses an actuating mechanism for moving the locking device from a locking state to an unlocking state by an actuating element (9) that is located at an end of the inner pipe that is distal from the outer pipe. Xu further discloses that detent holes (21) on the inner pipe penetrate through the outer pipe from an outer surface to an inner surface, the lock device comprises a detent part (4) that engages the detent holes and corresponding openings (20) in the actuating mechanism and that the actuating mechanism (embodiment of Figs. 8 and 9) comprises an inner liner layer (7) that is fixed to the inner surface of the inner pipe, such that movement of the actuating element will shift the inner liner relative to the inner pipe to push the detent part from a locking state to an unlocking state to allow a user to move the inner pipe relative to the outer pipe. Further, the inner liner clearly covers all of the detent holes in the inner pipe to isolate vacuum pressure of the inner pipe from the detent holes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the suction tube of Zhang with a similar actuating mechanism, as taught by Xu, to allow a user to alternatively move the locking device from a locking state to an unlocking state to move the inner and outer pipes relative to one another either by engaging the locking device (4-7) of Zhang on the outer pipe or by engaging the actuating element (9) of Xu on the end of the inner pipe, which will allow a user to adjust the length of the suction

tube by whichever mechanism is more convenient during use when starting or finishing use of the suction tube. Therefore, it would have been obvious to one of ordinary skill in the art to form the detent holes of Zhang to pass through the wall of the inner pipe to allow the detent pin to engage the corresponding openings of the inner liner layer and to provide the inner pipe of Zhang with a separate inner liner layer that is fixed to the inner surface thereof and will obviously isolate vacuum pressure of the inner pipe from the detent holes.

4. In reference to claims 2 and 3, Zhang clearly discloses that the locking device comprises a detent pin boss (3) fixed to said guiding bush (2), a spring (5) connected to detent pin (6), a detent shifting fork (10) whose end is connected to the detent pin and the middle part thereof is connected rotatably to the detent boss, a casing (4) having a hatch at its side and the other side of the detent shifting fork extending out of the hatch of the casing to form a button (7).

5. In reference to claims 4 and 5, Zhang further discloses that the second guiding member is a guiding slot (12) axially disposed at the outside surface of said inner pipe, said detent holes are disposed at said guiding slot and said first guiding member is a guiding rib (11) axially disposed at the inside wall of said guiding bush and slidably moved within said guiding recess.

6. In reference to claim 6, Xu discloses that the inner liner layer is an inner liner tube (structure of liner 7 in Fig. 9 read son “tube” being defined as “a hollow, usually

cylindrical [but not necessary] body used esp. for conveying or containing liquids”<sup>1</sup>, the liner 7 being hollow and in this case being used in combination with the inner pipe to convey gasses under suction) having an outer surface and an inner surface. Further, when applied to the Zhang apparatus, it would have been obvious to provide the outer surface of the liner tube with a groove extending axially along said inner liner tube and facing the detent holes to accommodate the second guiding member (12) formed on the inner pipe while maintaining the desired function.

7. In reference to claim 7, the inner liner tube, as discussed supra, comprises openings (20) that will form a clearance between the outer surface of the liner and the inner surface of the inner pipe such that, when the locking device is in the locking state, the detent pin will obviously penetrate through one of the detent holes (as discussed supra) and insert into the clearance space within one of the openings (20).

8. In reference to claim 8, Xu discloses that the distal end of the inner liner tube is provided with structure for attachment to actuating device (9) that will also obviously act as a sealing member to seal the vacuum pressure from the detent holes and the groove of the inner pipe of Zhang and it further would have been obvious that the inner liner would further have some form of end sealing member to seal the vacuum pressure from the detent holes and grooves of the inner pipe of Zhang on the other end of the inner liner to prevent loss of vacuum pressure, which, the Examiner hereby takes official notice, that it is well known in the art as being undesirable in the art of vacuum cleaners and vacuum tubes.

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<sup>1</sup> *Dictionary.com Unabridged (v 1.1)*

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection. The applicant's arguments that the one-piece inner tube of Zhang cannot be considered to have inner and outer surfaces and also have **separate** inner liner fixed to the inner surface. As discussed supra, the Xu reference is provided as motivation to provide a **separate** inner liner to the inner pipe of Zhang.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim (6,454,308) discloses a suction tube having similar structure and function as the applicant's claimed invention.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The new limitation of the inner pipe having inner and outer surfaces with the **separate** inner liner being positioned on the inner surface is considered to require the addition of the Xu reference as teaching for a separate inner liner.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN R. MULLER whose telephone number is (571)272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. R. M./  
Examiner, Art Unit 3723  
5/13/2008

/Joseph J. Hail, III/  
Supervisory Patent Examiner, Art Unit 3723